

B4 (10) extends radially from the outer pipe (3) by only a short distance. More than one inlet pipe may be surrounded by a common outer pipe as is shown in Figure 2c.

IN THE CLAIMS

Please substitute the following amended claims for corresponding claims previously presented. A copy of the amended claims showing current revisions is attached.

Please cancel claims 8-9 and 22-46 without prejudice.

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B5 1. (Amended) A reactor for containing a solid catalyst for a heterogeneous gas-phase reaction comprising at least one inlet pipe for a molecular oxygen-containing gas, said inlet pipe having an outlet and surround means for surrounding a substantial portion of said inlet pipe in said reactor with an inert fluid, wherein the inert fluid surrounding the inlet pipe is sealed.

2. (Amended) A reactor as claimed in claim 1 in which at least 85% of said pipe in said reactor is surrounded by said surround means.

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26 5. (Amended) A reactor as claimed in claim 1 in which said surround means for surrounding a substantial portion of said inlet pipe in said reactor with inert fluid comprises an outer pipe surrounding a substantial portion of at least one inlet pipe for molecular oxygen containing gas in said reactor and provided with a supply of insert fluid.

16. (Amended) A reactor as claimed in claim 12 in which said restriction is located within a region of said inlet pipe surrounded by said means for surrounding said inlet pipe with inert fluid.

17. (Amended) A reactor as claimed in claim 1 wherein said at least one inlet pipe comprises a plurality of inlet pipes.

18. (Amended) A reactor as claimed in claim 17 in which the inlets are separated by a distance which is in excess of potential flame length.

19. (Amended) A reactor as claimed in claim 17 in which a molecular oxygen-containing gas for said inlet pipes is provided from a common end box having an inventory.

20. (Amended) A reactor as claimed in claim 1 in which said inlet pipe is operably connected to a supply of molecular oxygen-containing gas provided through at least one flow restriction means which restrict flow of molecular oxygen-containing gas to the inlet pipe.

Please add new claims 47-65 as follows:

47. (New) A reactor for containing a solid catalyst for a heterogeneous gas-phase reaction into which reactor there extends at least one inlet pipe for a molecular oxygen-containing gas, in which, said inlet pipe has means for surrounding a substantial portion of said pipe in said reactor with an inert fluid, and further wherein the inert fluid

surrounding the inlet pipe is provided with a limited supply of inert fluid sufficient to replace minor leaks.

48. (New) A reactor as claimed in claim 47 in which at least 85% of the said pipe in said reactor is surrounded by said surround means.

49. (New) A reactor as claimed in claim 47 in which said inert fluid comprises an inert gas.

50. (New) A reactor as claimed in claim 49 in which said inert gas is selected from the group consisting of nitrogen, carbon dioxide, helium, argon, neon, krypton and mixtures thereof.

51. (New) A reactor as claimed in claim 47 in which said means for surrounding a substantial portion of said inlet pipe in said reactor with inert fluid comprises an outer pipe surrounding a substantial portion of one or more inlet pipes for molecular oxygen containing gas in said reactor and provided with a supply of inert fluid.

52. (New) A reactor as claimed in claim 51 which further comprises means for allowing for differential expansion of said inlet pipe and said means for surrounding said pipe with inert fluid.

53. (New) A reactor as claimed in claim 47 which further comprises means for detecting a change in pressure of said inert fluid surrounding said inlet pipe.

54. (New) A reactor as claimed in claim 47 in which said inlet pipe further has means for suppressing ingress to the inlet pipe from the reactor of flame, reagents, products, catalyst or combinations thereof.

55. (New) A reactor as claimed in claim 54 in which said ingress suppression means comprises means for providing molecular oxygen-containing gas in said inlet pipe at a higher pressure than the pressure in said reactor.

56. (New) A reactor as claimed in claim 54 in which said ingress suppression means comprises a restriction to the outlet of said inlet pipe.

57. (New) A reactor as claimed in claim 56 in which said restriction comprises one or more orifices.

58. (New) A reactor as claimed in claim 56 in which said restriction is located at a distance from the outlet of said inlet pipe in the reactor such that a potential detonation is avoided.

59. (New) A reactor as claimed in claim 56 in which said restriction is located 4 to 5 pipe diameters from the end of the inlet pipe.

60. (New) A reactor as claimed in claim 56 in which said restriction is located within the region of said inlet pipe surrounded by said means for surrounding said inlet pipe with inert fluid.

61. (New) A reactor as claimed in claim 47 having more than one inlet pipe.

62. (New) A reactor as claimed in claim 61 in which the distance between inlets is significantly in excess of the potential flame length.

63. (New) A reactor as claimed in claim 61 in which said molecular oxygen-containing gas for said inlet pipes is provided from a common end box having a low inventory.

64. (New) A reactor as claimed in claim 47 in which said inlet pipe is adapted to be operably connected to a supply of molecular oxygen-containing gas provided through one or more flow restriction means which restrict the flow of molecular oxygen-containing gas to the inlet pipe.

65. (New) A reactor as claimed in claim 47 in which the reactor is a fluid bed reactor.